

C1
Crncl'd
a housing;

a reflowable surface mount contact secured to said housing and adapted to surface mount to a first pad on the substrate during a reflow process; and

a non-surface mount hold down secured inside said housing and
adapted to mount to a hole in the substrate for providing strain relief to the mating of the surface mount contact to the substrate, wherein during the reflow process said non-surface mount hold down fuses to said substrate after said surface mount hold down fuses to said first pad such that said surface mount contact centers on said first pad without contacting another pad on the substrate, and wherein said non-surface mount hold down is adapted to retain said housing a distance from a surface of the substrate.

C2
9. A ball grid array connector mountable to a substrate, comprising:

a housing;

a plurality of contacts within said housing;

a plurality of fusible elements secured to said contacts for mounting to pads on the substrate during a reflow process; and

a hold down adapted to mount to a hole in the substrate and secured inside
said housing for providing strain relief to the mating of a fusible element to the substrate, wherein during the reflow process said hold down fuses to said substrate after said fusible element fuses to a first pad such that said fusible element centers on said first pad without contacting another pad on the substrate, and wherein said hold down is adapted to retain said housing a distance from a surface of the substrate.

CB
SBW
15. A method of mounting an electrical connector to a substrate, comprising:

*2/3
C/MCL'd.*

providing an electrical connector having a contact and a hold down;
providing a substrate having a pad;
securing said contact to said pad on said substrate during a reflow process;
placing said hold down into a hole in said substrate so as to permit said contact to center on said pad upon mounting to the substrate without contacting another pad on the substrate, wherein said hold down is adapted to retain said housing a distance from a surface of the substrate; and
securing said hold down to said substrate during said reflow process,
wherein said hold down is adapted to limit flattening of said contact during said reflow process.

C4

25. An electrical connector mountable to a substrate, comprising:

a housing having a mounting end facing the substrate;
a plurality of contacts secured to said housing;
a plurality of fusible elements each secured to a respective one of said plurality of contacts; and
a standoff extending a distance from said mounting end of said housing and adapted to enter the substrate, wherein said standoff is adapted to limit flattening of said fusible elements during a reflow process, and wherein during the reflow process said standoff fuses to said substrate after said fusible element fuses to a first pad such that said fusible element centers on said first pad without contacting another pad on the substrate.

C5

31. In a ball grid array connector mountable to a substrate, wherein the improvement comprises a hold down adapted to enter an opening in the substrate, wherein said hold down is adapted to limit flattening of said fusible elements during a reflow process, and wherein during the reflow process said hold down fuses to said substrate after said fusible

*C5
End'd.*

element fuses to a first pad such that said fusible element centers on said first pad without contacting another pad on the substrate.

C6

39. An electrical connector mountable to a substrate, comprising

a housing;

a surface mount contact secured to said housing and adapted to surface mount to a pad on the substrate during a reflow process; and

a non-surface mount hold down secured to said housing and adapted to mount to a hole in the substrate, wherein said non-surface mount hold down is adapted to limit flattening of said surface mount contact during the reflow process, and wherein during the reflow process said hold down fuses to said substrate after said fusible element fuses to a first pad such that said fusible element centers on said first pad without contacting another pad on the substrate.

40. An electrical connector mountable to a substrate, comprising:

a housing;

a surface mount contact secured to said housing and adapted to surface mount to a pad on the substrate during a reflow process; and

a non-surface mount hold down secured to said housing and adapted to mount to a hole in the substrate, wherein said hole has a perimeter larger than a perimeter of said hold down, and wherein said non-surface mount hold down is adapted to limit flattening of said surface mount contact during the reflow process, and wherein during the reflow process said hold down fuses to said substrate after said fusible element fuses to a first pad such that said fusible element centers on said first pad without contacting another pad on the substrate.

41. A method of mounting a connector to a substrate, comprising:

*C6
C7
C8*

providing an electrical connector having a contact and a hold down;
providing a substrate having pads and a hole;
inserting said hold down in said hole, wherein said hole has a perimeter
larger than a perimeter of said hold down;
securing said hold down to said substrate wherein said hold down is
adapted to limit flattening of said contact during a reflow process, and wherein during the reflow
process said hold down fuses to said substrate after said fusible element fuses to a first pad such
that said fusible element centers on said first pad without contacting another pad on the substrate;
and
securing said contact to said pads on said substrate.
